

gen to the atmosphere; the other, hitherto little attended to, in which it acts as a menstruum, conveying certain compounds, insoluble in water, from the soil into the interior of plants to become constituents of their organism.

The experiments he details are of two kinds, one set being on single compounds, the other on a mixture of these compounds. The results of the latter seem to prove that water impregnated with carbonic acid is capable of dissolving several substances at the same time, and of keeping them mixed in solution, as carbonate of lime, carbonate of magnesia, phosphate of lime, silica, &c.

He concludes his paper with certain remarks of a theoretical nature, founded on his experimental results, bearing on vegetable physiology, soils and their substrata, and mineral waters,—making these remarks, as he says, with the hope of drawing attention to the subject in its most interesting relations, and of exciting further and more minute research.

“An Account of the Hurricane of the 10th of October, 1846, at the Havanna, contained in a Despatch addressed to Viscount Palmerston by Her Majesty’s Commissioners at the Havanna, dated the 24th of February, 1847.” Communicated, through the President, by Viscount Palmerston.

The hurricane commenced at half-past ten o’clock on the night of the 10th of October, 1846, and was at its utmost height until from seven to ten the following morning, producing the most extensive destruction of houses and public buildings, and great devastation among the shipping in the harbour. The barometer was observed to fall to the lowest point, after the hurricane had subsided. The progress of the hurricane appears to have been from the south, and passing on to the west, to have lost itself in Florida. It was not attended with lightning, as was the case with the hurricane of 1844.

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May 6, 1847.

The MARQUIS OF NORTHAMPTON, President, in the Chair.

The Right Hon. Lord John Russell was elected into the Society.

“Researches into the effects of certain Physical and Chemical Agents on the Nervous System.” By Marshall Hall, M.D., F.R.S., &c.

In this paper, to which the author considers his former communication as strictly preliminary, he proposes to treat of what he terms the electrogenic state in the spinal marrow and in incident nerves, and to give the details of the collateral experiments he alluded to at the close of his last paper. He also submits to the consideration of the Society the following circumstances, namely,

“1. The electrogenic state of the nerves admits of being dis-

charged, and is capable of inducing the phenomena of voltaism in other nerves.

"2. This state is inducible by momentary and slight voltaic currents.

"3. It is more inducible by the reverse than by the direct voltaic current, as stated by others.

"4. When a nerve forms a part of the voltaic circle, new and superadded circles may be effected, which, by inducing a *change* in the condition of the first, result in the phenomena of muscular contractions.

"5. When the voltaic circle is either complete, or, being completed, is broken, and various parts of the wires and animal tissues which form or formed that circle are *connected* by a conductor, a series of phenomena is produced, some of which still require explanation.

"6. It is also important, especially in a medical point of view, to observe the manner and degree in which the *vis nervosa* and the *vis muscularis* are diminished by repeated voltaic action."

In conclusion the author observes, "I have purposely and carefully avoided all theoretical views, confining myself to the accurate detail of experiments. The condition induced in the nervous system by a current of voltaism I have denominated the *electrogenic*. It might be viewed as one of polarization, its discharge one of depolarization. But I have nothing to add to these views, beyond what is universally known. The phenomena of the continuous, interrupted, and sudden discharge of the electrogenic condition, have not, I believe, been traced and detailed before."

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May 20, 1847.

The MARQUIS OF NORTHAMPTON, President, in the Chair.

A paper was read, entitled "On the Nervous System of the Heart." By Robert Lee, M.D., F.R.S.

The author premises a historical notice of the various opinions entertained by distinguished anatomists respecting the nerves of the heart; some having maintained that the human heart is copiously supplied with nerves, and others that it has few or none. In September 1846, the author resolved to dissect, under the microscope, the nerves of the heart while covered with alcohol, as he had done those of the uterus. His examinations of the foetal heart, of the heart of a child at the age of six years, of the heart of an adult in the sound state, of the human heart greatly hypertrophied, and of the heart of the ox, warrant, he thinks, the following conclusions:—1st, that the blood-vessels and the muscular structure of the auricles and ventricles of the heart are furnished with numerous ganglia and plexuses of nerves which have hitherto been neither described nor represented by any anatomist; 2ndly, that these nervous structures of the heart, which are distributed over its surface and